UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,533	04/10/2006	Hidetoshi Yamasaki	2006-0476A	8903

52349 7590 06/10/2009

WENDEROTH, LIND & PONACK L.L.P.
1030 15th Street, N.W.
Suite 400 East
Washington, DC 20005-1503

EXAMINER	
PATEL, MUNJALKUMAR C	

ART UNIT	PAPER NUMBER
2617	

MAIL DATE	DELIVERY MODE
06/10/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/575,533	YAMASAKI ET AL.	
	Examiner	Art Unit	
	Munjal Patel	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 April 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. **Claims 1-3, 6-14, 16, and 17** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kondo (US PAT 5,293,380)** here in after referenced as **Kondo,** as applied to claims, and further in view of **Matsuno (US PAT 5,613,211)** here in after referenced as **Matsuno**.

4. **Regarding claim 1, Kondo** discloses an inter-station transmission method **(Kondo: Abstract)** used in a mobile communication system comprising a mobile station **(Kondo: Fig 1: 5)** and a base station **(Kondo: fig 1: 3)** operable to return, to the mobile station by means of a TDMA system **(Kondo: Abstract)** , a response packet, the response packet being returned by the base station in response to a packet

received from the mobile station **(Kondo: column 3 lines [67-68], column 4 lines [1-3])**, and the response packet being returned within a same time slot used for receiving the response packet,

wherein the base station includes:

a radio base station **(Kondo: fig 1: 3)** operable to demodulate an uplink packet signal **(Kondo: Fig 1: 3 & 7, along with ability to handle TDMA frames describes functional blocks that operable to demodulate an uplink packet)** received from the mobile station **(Kondo: Fig 1:5)** and extract uplink transmission data **(Kondo: Fig 1: 3 & 7, along with ability to handle TDMA frames as stated in summary describes functional blocks that extracts an uplink packet)**, and operable to modulate downlink transmission data to be transmitted to the mobile station and generate a downlink packet signal **(Kondo: Column 3 lines [1-8] describes base station communicating with mobile station, which implies modulating downlink transmission data and generate downlink packet signal)**;

a communication control station operable to receive the uplink transmission data from the radio base station **(Kondo: Column 2 lines [60-70] describes base station communicating with control station, which implies communication control station operable to receive the uplink transmission data from radio base station)**, generate downlink transmission data corresponding to the uplink transmission data received from the radio base station and transmit the generated downlink transmission data to the radio base station **(Kondo: Column 2 lines [60-70] describes base station communicating with control station, which implies generating downlink**

transmission data corresponding to the uplink transmission data received from the radio base station and transmit the generated downlink transmission data to the radio base station); and

an inter-station transmission path that establishes a wired connection between the radio base station and the communication control station **(Kondo: Fig 1: Communication cables 4-a & 4-b, column 2 lines [66-68])**, and

wherein the inter-station transmission method includes:

in the radio base station **(Kondo: Col 6 lines 65 – Col 7 lines 23 discloses base station)**, reproducing a clock synchronized with a clock used when the generated downlink transmission data is transmitted from the communication control station **(Kondo: Col 6 lines 65 – Col 7 lines 23 also discloses base station having its own timing pulse generator 56 & signal generator 57 for outputting a clock, which is synchronized with reset pulse)**;

by means of the reproduced-synchronized clock, transmitting the uplink transmission data from the radio base station to the communication control station **(Kondo: Fig 1 & column 3 lines [1-8])**, the uplink transmission data being transmitted, without any changes, in a TDMA frame format **(Kondo: Column 2 lines [35-40] & Col. 3 lines [49-52] discloses TDMA frames are communicated with communicate control station in sync with synchronous signal generator, hence no change in TDMA frame format)** used for a radio link between the radio base station **(Kondo: Fig 1:3a & 3b , column 2 lines [66-68])** and the mobile station **(Kondo: Fig 1: Mobile station 5, column 3 lines[4])**; and

in the communication control station **(Kondo: Fig 1: control station 1, column 3 lines [2-3])**, processing the uplink transmission data received from the radio base station in the TDMA frame format **(Kondo: Column 2 lines [35-40])**, **however**, **Kondo** briefly describes the communication between control station and the base station format as transform signal codes (information) into a transmission format which is agreed upon by the control station and the radio base station beforehand **(Kondo: Col 5 lines [60-65], which examiner interprets as TDMA as well as the whole system is TDMA)**, **however,** the examiner maintains that it was well known in the art to provide TDMA frame format as transmission format between base station and control station as taught by **Matsuno (Matsuno: Col 9 lines [7-11] discloses communication between base station and control station is in TDMA, hence uplink and downlink in TDMA)**.

1. **In a** similar field of endeavor **Matsuno** discloses method of establishing inter base-station synchronization and mobile radio communication system using the method. In addition **Matsuno** discloses communication between base station and control station is in TDMA format.

2. **Therefore,** it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify **Kondo** by specifically providing communication between base station and control station is in TDMA format as taught by **Matsuno**, for the purpose of assuring functions of detecting and avoiding interference while communicating **(Matsuno: Col 2 lines [2-10]).**

3. **Regarding claim 2, Kondo** discloses everything in claim 1, along with the downlink transmission data is transmitted, from the communication control station to the radio base station **(Kondo: Column 4 lines [23-41] describes procedure of communication control station communicating with base station in TDMA format & Column 2 lines [35-40])** , in the TDMA frame format, and in the radio base station, the downlink is transmission data received from the communication control station is processed in the TDMA frame format **(Matsuno: Col 9 lines [7-11] discloses communication between base station and control station is in TDMA, hence uplink and downlink in TDMA)**. This claim is rejected for the same motivation as claim 1.

4. **Regarding claim 3, Kondo** discloses everything in claim 2 along with downlink transmission data is transmitted, from the communication control station **(Kondo: Column 4 lines [23-41] describes procedure of communication control station communicating with base station),** in accordance with a predetermined communication control station transmission clock **(Kondo: Column 4 lines [41-44])**, and wherein the inter-station transmission method further comprises: in the radio base station, reproducing a radio base station reception clock synchronized **(Kondo: Column 5 lines [27-48] discloses transmission pulse from sync signal generator is adjusted according to the radio base station, i.e. reproducing a radio base station reception clock synchronized)**, with the predetermined communication control station transmission clock **(Kondo: Column 4 lines [55-68] discloses transmission**

pulse is set according to the user's choice i.e. predetermined) from the downlink transmission data received from the communication control station and in the radio base station processing the downlink transmission data by using the radio base station reception clock **(Kondo: Column 5 lines [36-45]).** This claim is rejected for the same motivation as claim 2.

5. **Regarding claim 6, Kondo** discloses everything in claim 1 as above, along with when a response signal is transmitted from the communication control station, only a payload portion of the response packet is transmitted to the radio base station **(Kondo: Fig 6 & 8 describes a control station and base station communication which functions as modulating and demodulating TDMA packets, demodulating is striping header and sending payload to further circuitry and eventually to base station)**, and wherein the radio base station, transmission of the response packet begins with a predetermined timing using header information previously retained, without waiting for an arrival of the payload portion from the communication control station **(Kondo: Column 5 lines [60-65] describes circuitry which transform signal codes to transmission format from the previously retained information beforehand)**. This claim is rejected for the same motivation as claim 1.

6. **Regarding claim 7, Kondo** discloses everything in claim 3 as above, along with a plurality of radio base stations are respectively connected to the communication control station respectively via the plurality of respective inter-station transmission paths

(Kondo: Column 2 lines [64-70] column 3 lines [1-8] & Column 3 lines [42-49]) , and wherein each radio base station of the plurality of radio base stations adjusts, using a respective clock unit of a respective radio base station operation clock **(Kondo: Column 3 lines [49-52])**, a delay time difference, which occurs according to a length of the respective inter-station transmission path, between a downlink transmission path delay and a predetermined transmission path delay. This claim is rejected for the same motivation as claim 3.

7. **Regarding claim 8, Kondo** discloses everything in claim 1 as above along with the plurality of radio base stations are respectively connected to the communication control station via a plurality of respective inter-station transmission paths **(Kondo: Column 2 lines [64-70] column 3 lines [1-8] & Column 3 lines [42-49])**, wherein, in the communication control station, a plurality of pieces of uplink transmission data, which are respectively outputted from each radio base station of the plurality of radio base stations and which correspond to a same packet received from the mobile station, are received in a predetermined slot **(Kondo: Fig 7 & Column 6 lines [42-49])**, wherein, in the communication control station, a reception timing of uplink transmission data is detected **(Kondo: Fig 7 & Column 6 lines [48-52])**, the uplink transmission data corresponding to a packet having been first received, and wherein, in the communication control station, a selection process is performed only on uplink transmission data that has been received before a predetermined period of time has passed after the reception timing **(Kondo: Column 7 lines [55-65] describes a**

selection process of uplink transmission data based on the set period of time delay). This claim is rejected for the same motivation as claim 1.

8. **Regarding claim 9, Kondo** discloses everything in claim 8 as above along with the predetermined period of time is set according to a length of an area covered by the plurality of radio base stations **(Kondo: Column 1 lines [65-70] Column 2 lines [1-6] & Column 4 lines [6-12])**. This claim is rejected for the same motivation as claim 8.

9. **Regarding claim 10, Kondo** discloses everything in claim 8 as above along with the predetermined period of time is set according to a length of a longest inter-station transmission path among the plurality of inter-station transmission paths **(Kondo: Column 1 lines [65-70] Column 2 lines [1-6] & Column 4 lines [6-12])**. This claim is rejected for the same motivation as claim 8.

10. **Regarding claim 11, Kondo** discloses everything in claim 3 as above along with where in the communication control station, the downlink transmission data, into which dummy data for reproducing the radio base station reception clock is inserted, is transmitted in a period which is within the TDMA frame and in which a channel data packet to be transmitted is not present **(Kondo: Column 6 lines [10-14]).** This claim is rejected for the same motivation as claim 3.

5. **Regarding claim 12, Kondo** discloses a radio base station monitoring method used in a mobile communication system comprising a mobile station **(Kondo: Fig 1:5)** and a base station operable to return, to the mobile station by means of a TDMA system **(Kondo: Abstract)**, a response packet, the response packet being returned by the base station in response to a packet received from the mobile station, and the response packet being returned within a same time slot used for receiving the response packet,

wherein the base station includes:

a radio base station **(Kondo: Fig 1:3)** operable to demodulate an uplink packet signal **(Kondo: Fig 1:3 &7, along with ability to handle TDMA frames describes functional blocks that operable to demodulate an uplink packet)** received from the mobile station **(Kondo: Fig 1:5)** and extract uplink transmission data **(Kondo: Fig 1:3 &7, along with ability to handle TDMA frames as stated in summary describes functional blocks that extract and uplink packet)**, and operable to modulate downlink transmission data to be transmitted to the mobile station and generate a downlink packet signal **(Kondo: Column 3 lines [1-8] describes base station communicating with mobile station, which implies modulating downlink transmission data and generate downlink signal)**;

a communication control station operable to receive the uplink transmission data from the radio base station **(Kondo: Column 2 lines [60-70] describes base station communicating with control station, which implies communication control station operable to receive the uplink transmission data from radio base station)**, generate downlink transmission data corresponding to the

uplink transmission data received from the radio base station and transmit the generated downlink transmission data to the radio base station **(Kondo: Column 2 lines [60-70] describes base station communicating with control station, which implies communication control station generating and transmitting downlink data to radio base station corresponding to uplink data received from base station)**; and an inter-station transmission path that establishes a wired connection between the radio base station and the communication control station **(Kondo: Fig 1: Communication cables 4-a & 4-b, Column 2 lines [66-68])**, and

wherein the radio base station monitoring method includes:

in the radio base station **(Kondo: Col 6 lines 65 – Col 7 lines 23 discloses base station)**, reproducing a clock synchronized with a clock used when the generated downlink transmission data is transmitted from the communication control station **(Kondo: Col 6 lines 65 – Col 7 lines 23 also discloses base station having its own timing pulse generator 56 & signal generator 57 for outputting a clock, which is synchronized with reset pulse)**;

in the radio base station, generating monitoring data for notifying a state of the radio base station to the communication control station;

in the radio base station, time division multiplexing the monitoring data into the uplink transmission data with a slot timing that is only allocated to a downlink;

in the radio base station, by means of the reproduced-synchronized clock, transmitting the uplink transmission data and the monitoring data **(Kondo: Fig 8 & Column 7 lines [3-5] describes CPU circuit for supervising the entire base station)**

to the communication control station, the uplink transmission data and the monitoring data being transmitted **(Kondo: Fig 8 & Column 7 lines [3-5] describes CPU circuit for supervising the entire base station, hence uplink transmission data and monitoring data being transmitted, Col 3 lines [1-8] discloses TDMA mobile communication system)**, without any changes, in a TDMA frame format used **(Kondo: Column 3 lines [49-52])** for a radio link between the radio base station and the mobile station;

in the communication control station, processing the uplink transmission data received from the radio base station in the TDMA frame format **(Kondo: Column 7 lines [13-23] & column 2 line [60-70], column 3 lines [1-8] discloses TDMA mobile communication system)**; and

in the communication control station, monitoring the state of the radio base station using the monitoring data **(Kondo: Fig 8 & Column 7 lines [3-5] describes CPU circuit for supervising the entire base station)**. **however**, **Kondo** briefly describes the communication between control station and the base station format as transform signal codes (information) into a transmission format which is agreed upon by the control station and the radio base station beforehand **(Kondo: Col 5 lines [60-65], which examiner interprets as TDMA as well as the whole system is TDMA)**, **however,** the examiner maintains that it was well known in the art to provide TDMA frame format as transmission format between base station and control station as taught by **Matsuno (Matsuno: Col 9 lines [7-11] discloses communication between base station and control station is in TDMA, hence uplink and downlink in TDMA)**.

11. **In a** similar field of endeavor **Matsuno** discloses method of establishing inter base-station synchronization and mobile radio communication system using the method. In addition **Matsuno** discloses communication between base station and control station is in TDMA format.

12. **Therefore,** it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify **Kondo** by specifically providing communication between base station and control station is in TDMA format as taught by **Matsuno**, for the purpose of assuring functions of detecting and avoiding interference while communicating **(Matsuno: Col 2 lines [2-10]).**

13. **Regarding claim 13, Kondo** discloses a mobile communication system comprising a mobile station **(Kondo: Fig 1:5)** and a base station operable to return to the mobile station by means of a TDMA system **(Kondo: Column 7 lines [13-23] & column 2 line [60-70], column 3 lines [1-8] discloses TDMA mobile communication system)**, a response packet **(Kondo: Column 6 lines [07-28 discloses a response from base station in response to a packet received from mobile station]**, the response packet being returned by the base station in response to a packet received from the mobile station, and the response packet being returned within a same time slot used for receiving the response packet **(Kondo: column 2 lines [15-18])**, wherein the base station includes:

a radio base station **(Kondo: Fig 1:3)** operable to demodulate an uplink packet signal **(Kondo: Fig 1:3 & 7, along with ability to handle TDMA frames describes**

functional blocks that is operable to demodulate an uplink packet) received from the mobile station **(Kondo: Fig 1:5)** and extract uplink transmission data **(Kondo: Fig 1:3 & 7, along with ability to handle TDMA frames as stated in summary describes functional blocks that extracts an uplink data),** and operable to modulate downlink transmission data to be transmitted to the mobile station and generate a downlink packet signal **(Kondo: Column 3 lines [1-8] describes base station communicating with mobile station, which implies modulating downlink transmission data and generate downlink packet signal)**;

a communication control station operable to receive the uplink transmission data from the radio base station **(Kondo: Column 2 lines [60-70] describes base station communicating with control station, which implies communication control station operable to receive the uplink transmission data from base station)**, generate downlink transmission data corresponding to the uplink transmission data received from the radio base station and transmit the generated downlink transmission data to the radio base station **(Kondo: Column 2 lines [60-70] describes base station communicating with control station, which implies generating downlink transmission data corresponding to the uplink transmission data received from the radio base station and transmit the generated downlink transmission data to the radio base station)**;

6. and an inter-station transmission path that establishes a wired connection between the radio base station and the communication control station **(Kondo: Fig 1: Communication cables 4-a & 4-b, column 2 lines [66-68])**,

wherein the radio base station **(Kondo: Col 6 lines 65 – Col 7 lines 23 discloses base station)** reproduced a clock synchronized with a clock used when the generated downlink transmission data is transmitted from the communication control station **(Kondo: Col 6 lines 65 – Col 7 lines 23 also discloses base station having its own timing pulse generator 56 & signal generator 57 for outputting a clock, which is synchronized with reset pulse)**.

wherein the radio base station transmits, by means of the reproduced-synchronized clock, to the communication control station, the uplink transmission data, the uplink transmission data being transmitted **(Kondo: Fig 8 & Column 7 lines [3-5] describes CPU circuit for supervising the entire base station, hence uplink transmission data and monitoring data being transmitted, Col 3 lines [1-8] discloses TDMA mobile communication system)**, without any changes, in a TDMA frame format **(Kondo: Column 2 lines[35-40])** used for a radio link between the radio base station and the mobile station **(Kondo: Fig 1: Mobile station 5, column 3 line [4])**,

wherein the communication control station **(Kondo: Fig 1: control station 1, column 3 lines [2-3])** processes the uplink transmission data received from the radio base station, in the TDMA frame format, and transmits, to the radio base station, the downlink transmission data in the TDMA frame format, and

wherein the radio base station processes the downlink transmission data received from the communication control station, in the TDMA frame format **(Kondo: Column 2 lines [35-40])**. **however**, **Kondo** briefly describes the communication

between control station and the base station format as transform signal codes (information) into a transmission format which is agreed upon by the control station and the radio base station beforehand **(Kondo: Col 5 lines [60-65], which examiner interprets as TDMA as well as the whole system is TDMA)**, **however,** the examiner maintains that it was well known in the art to provide TDMA frame format as transmission format between base station and control station as taught by **Matsuno (Matsuno: Col 9 lines [7-11] discloses communication between base station and control station is in TDMA, hence uplink and downlink in TDMA)**.

14. **In a** similar field of endeavor **Matsuno** discloses method of establishing inter base-station synchronization and mobile radio communication system using the method. In addition **Matsuno** discloses communication between base station and control station is in TDMA format.

15. **Therefore,** it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify **Kondo** by specifically providing communication between base station and control station is in TDMA format as taught by **Matsuno**, for the purpose of assuring functions of detecting and avoiding interference while communicating **(Matsuno: Col 2 lines [2-10]).**

16. **Regarding claim 14, Kondo** discloses the mobile communication system according to claim 13 as above, along with the communication control station includes: a signal generating unit operable to generate (i) a communication control station transmission clock for providing a transmission timing of the downlink transmission data

and (ii) a communication control station reception clock for providing a reception timing of the uplink transmission data **(Kondo: Fig 7 Column 6 lines [33-64])**;

a data generating unit operable to (i) generate, in accordance with the communication control station transmission clock, the downlink transmission data and (ii) transmit the downlink transmission data **(Kondo: Fig 8:3 column 7 lines [20-23])**;

and a reception unit **(Kondo: Fig 9 and Column 7 lines [24-54])** operable to receive, in accordance with the communication control station reception clock, the uplink transmission data, and wherein the radio base station includes:

a reproduction unit operable to reproduce, from the downlink transmission data received from the communication control station, a radio base station reception clock and a radio base station transmission clock, the radio base station reception clock and the radio base station transmission clock being synchronized with the communication control station transmission clock unit **(Kondo: Fig 9 and Column 7 lines [24-54])**; and

a radio unit operable to (i) process the downlink transmission data by using the radio base station reception clock reproduced in the reproduction unit and (ii) process the uplink transmission data by using the radio base station transmission clock reproduced in the reproduction unit. **(Kondo: Fig 9 and Column 7 lines [24-65]).** This claim is rejected for the same motivation as claim 13.

17. **Regarding claim 16, Kondo** discloses the mobile communication system according to claim 14, wherein a plurality of radio base stations are respectively connected to the communication control station via a plurality of respective inter-station

transmission paths **(Kondo: 1: 4-a & 4-b, column 2 lines [66-68])**, wherein, in the communication control station, the reception unit is operable to receive, in a predetermined slot, a plurality of pieces of uplink transmission data, which are respectively outputted from each radio base station of the plurality of radio base stations and which correspond to a same packet received from the mobile station, and wherein the communication control station further includes: a detection unit operable to detect a reception timing of uplink transmission data **(Kondo: Fig 9: Comparator 87 Column 8 lines [20-23])**, the uplink transmission data corresponding to a packet having been first received; and a selection unit **(Kondo: Fig 9, Column 7 lines [55-70] column 8 lines [1-7])** operable to perform a selection process only on uplink transmission data that has been received before a predetermined period of time has passed after the reception timing. This claim is rejected for the same motivation as claim 14.

18. Regarding claim 17, Kondo discloses the mobile communication system according to claim 14, wherein the data generating unit of the communication control station generates the downlink transmission data, into which dummy data for reproducing the radio base station reception clock is inserted, and transmits the down link transmission data in a period which is within the TDMA frame and in which a channel data packet to be transmitted is not present **(Kondo : Column 6 lines [29-32] describes sync configuration is done before the start of operation).** This claim is rejected for the same motivation as claim 14.

19. **Claims 4, 5, and 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over obviousness over **Kondo** in view of **Matsuno** and in further view of **Borth et al (US PAT: US 4,852,090)** here in after referenced as **Borth**.

20. **Regarding claim 4, Kondo** in view of **Matsuno** discloses everything in claim 3 as above, However **Kondo** in view of **Matsuno** fails to disclose radio reception clock reproduction by using PLL control, However examiner maintains that it was well known in the art at the time of invention to use PLL control to reproduce clock as taught by **Borth (Borth: Column 11 lines [42-61] for the purpose of validating the time slot detect signal)**.

21. In similar field of endeavor **Borth** discloses TDMA communication system with adaptive equalization. In addition **Borth** discloses the radio base station reception clock is reproduced in the radio base station using PLL control**.**

22. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify **Kondo** in view of **Matsuno** by specifically providing PLL control to reproduce clock as taught by **Borth** for the purpose of validating time slot detect signal **(Borth: Column 11 lines 41-43).**

23. **Regarding claim 5, Kondo** in view of **Matsuno** discloses everything in claim 3 as above along with in the communication control station, a communication control station reception clock, which results from multiplying or dividing the predetermined communication control station transmission clock by n (n is a natural number), is used to receive the uplink transmission data, wherein, in the radio base station, a radio base

station operation clock is generated by multiplying the radio base station reception clock by m (m is an integer greater than 1), wherein, in the radio base station, the uplink transmission data is transmitted using a radio base station transmission clock that results from multiplying or dividing the radio base station operation clock by k (k is a natural number) and has a frequency synchronized with the communication control station reception clock **(Kondo: Fig 7: counter 72 and clock signal generator 71, column 6 lines[33-38]),** wherein, a phase difference **(Borth: Column 11 lines [42-61])**, which occurs according to a length of the inter-station transmission path, between the radio base station transmission clock and the communication control station reception clock is adjusted by a clock unit of the radio base station operation clock.

24. **However Kondo** in view of **Matsuno** fails to disclose synchronization with phase difference, between the radio base station transmission clock and the communication control station, **However** the examiner maintains that it was well known in the art to provide synchronization with phase difference between the radio base station transmission clock and the communication control station, as taught by **Borth (Borth: Column 11 lines [42-61]).**

25. In similar field of endeavor **Borth** discloses TDMA communication system with adaptive equalization. In addition **Borth** discloses synchronization with phase difference, between the radio base station transmission clock and the communication control station**.**

26. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify **Kondo** in view of **Matsuno** by specifically

providing synchronization with phase difference, between the radio base station transmission clock and the communication control station as taught by Borth for the purpose of validating time slot detect signal **(Borth: Column 11 lines 41-43).**

27. **Regarding claim 15**, **Kondo** in view of **Matsuno** discloses the mobile communication system according to claim 14 as above, However **Kondo** in view of **Matsuno** fails to disclose a radio base station further includes an adjusting unit operable to control an amount of overall transmission delays of an entire system by adjusting a phase difference which occurs according to a length of the inter-station transmission path, between the radio base station transmission clock and the communication control station reception clock **Borth (Borth: Timing controller 470 column 11 lines [42-61])**.

28. **However**, the examiner maintains that It was well known in the art to provide a radio base station further includes an adjusting unit operable to control an amount of overall transmission delays of an entire system by adjusting a phase difference which occurs according to a length of the inter-station transmission path, between the radio base station transmission clock and the communication control station reception clock as taught by **Borth**.

29. **In** similar field of endeavor **Borth** discloses TDMA communication system with adaptive equalization. In addition **Borth** discloses radio base station further includes an adjusting unit operable to control an amount of overall transmission delays of an entire system by adjusting a phase difference **(Borth: Timing controller 470 column 11**

lines [42-61]), which occurs according to a length of the inter-station transmission path, between the radio base station transmission clock and the communication control station reception clock.

30. **Therefore**, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify **Kondo** in view of **Matsuno** by specifically providing a radio base station further includes an adjusting unit operable to control an amount of overall transmission delays of an entire system by adjusting a phase difference which occurs according to a length of the at least one inter-station transmission path, between the radio base station transmission clock and the communication control station reception clock as taught by **Borth** for the purpose of validating time slot detect signal **(Borth: Column 11 lines 41-43)**.

Response to Arguments

31. Applicant's arguments with respect to the independent claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Munjal Patel whose telephone number is (571)270-5541. The examiner can normally be reached on Monday - Friday 9:00 AM - 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rafael Perez-Gutierrez can be reached on 571-272-7915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Munjal Patel
Examiner
Art Unit 2617

/M. P./
Examiner, Art Unit 2617

/Rafael Pérez-Gutiérrez/
Supervisory Patent Examiner, Art Unit 2617